

$$|NS_{C2}\rangle$$

CLAIMS

1. Nucleic acid in isolated form, encoding a polypeptide specific for the pathogenic strains of the *Neisseria* genus, or antigenic fragment thereof, excluding the sequences SEQ ID Nos 70A, 73A, 74A, 77A, 80A, 81A, 87A, 88A, 89A, 94A, 95A and 98A, the amino acid sequence of said specific polypeptide being identical or homologous to a sequence selected from the sequences of group II, group II consisting of the sequences SEQ ID No. 2 to SEQ ID No. 52 (even numbers) and the sequence SEQ ID No. 53.

2. Nucleic acid according to Claim 1, the nucleotide sequence of which is identical or homologous to a sequence selected from the sequences of group I, group I consisting of the sequences SEQ ID No. 1 to SEQ ID No. 51 (odd numbers).

3. Nucleic acid according to Claim 1, encoding a polypeptide specific for the pathogenic strains of the *Neisseria* genus, or antigenic fragment thereof, the amino acid sequence of said specific polypeptide being selected from the sequences SEQ ID Nos 55 to 77 (odd numbers).

4. Nucleic acid according to Claim 3, having a
25 nucleotide sequence selected from the sequences SEQ ID
Nos 54 to 76 (even numbers).

5. Polypeptide specific for the pathogenic strains of the *Neisseria* genus, and antigenic fragments thereof, the amino acid sequence of said specific polypeptide being identical or homologous to a sequence selected from the sequences of group II, consisting of the sequences SEQ ID No. 2 to SEQ ID No. 52 (even numbers) and the sequence SEQ ID No. 53.

6. Polypeptide according to Claim 5, specific for the pathogenic strains of the *Neisseria* genus, and antigenic fragments thereof, the amino acid sequence of said specific polypeptide being selected from the sequences SEQ ID Nos 55 to 77 (even numbers).

7. Expression vector comprising an expression cassette in which a nucleotide sequence as defined in one of Claims 1 to 4 is placed under conditions allowing its expression in a host cell.

8. Host cell transformed with the expression vector according to Claim 7.

9. Pharmaceutical composition comprising:

a) a nucleic acid according to one of Claims 1 to 4, in naked form or in combination with at least one agent facilitating transfection;

b) or a vaccination vector comprising a nucleotide sequence as defined in one of Claims 1 to 4, such as in particular a virus or a bacterium;

c) or a polypeptide according to either of Claims 5 and 6;

optionally in combination with a pharmaceutically acceptable vehicle.

10. Monospecific antibody directed against a polypeptide according to either of Claims 5 and 6.

11. Use of a nucleic acid according to one of Claims 1 to 4, or of a polypeptide specific for pathogenic *Neisseria* strains or of antigenic fragments thereof, according to either of Claims 5 and 6, for manufacturing a pharmaceutical composition intended for vaccination against *Neisseria*.

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